

Interactive whiteboards

The future is already here

Bart Halford



Interactive whiteboards continue to make inroads into our classrooms and to impact upon the way we teach. In this article, a primary school leader reflects upon the way his school has embraced the IWB adventure...

Computer technology is one of the most challenging changes on the educational landscape. It challenges us because it comes from outside our industry, because it changes almost as soon as we feel confident with it, because it motivates us to teach in new ways, because our students might know more about it than we do, and because achieving confidence and competence with it is very time consuming. This is the sharp end of change management for school leaders.

A recent article in *Time* magazine claimed that in the US the average amount spent on ICT hardware was \$80 per student but only \$6 per student was spent on teacher training for ICT. The claim echoes concerns raised in Australia that, while there has been and will continue to be significant investment in ICT in schools, this is not being matched by investment in teacher's professional development to understand and use the equipment. This article presents one school's story in adopting and learning to use a new teaching tool – the interactive whiteboard.

Interactive whiteboards

At the beginning of 2006 our school installed four interactive whiteboards in classrooms. It is our plan to have all classrooms operating with interactive boards by 2008.

The first issue we had to resolve was the placement of the boards. We received varied advice including that it was best to begin by placing the boards in common areas (Library, Computer Lab) to maximise access by all staff. Others suggested we keep the boards mobile to maximise exposure. However, we decided to place the boards in selected teachers' classrooms. They became our 'pioneers'. This approach has proven to be successful. As a group these teachers have been able to support and guide each other and also excite other teachers who have seen the boards in regular operation. We have found that a collegiate group working together can provide invaluable time and morale support.

Interactive whiteboards provide an extraordinary opportunity to expand teachers' ability to engage students, particularly boys. However, they do present a number of challenges. School managers can anticipate a number of issues to arise during the course of implementation that will place demands on staff time: professional training with the equipment is important and ongoing; researching suitable Internet sites has proven to be time consuming; troubleshooting and down time with the equipment has also made demands on staff; the archiving of sites has also emerged as a significant issue for us; we have had to provide a basic training course for our casual teachers.

The result is increased demand on teachers' time well over that provided by our professional learning program. Our staff members have made this commitment in the belief that the boards do provide significant improvements in classroom pedagogy. We are lucky to have had a dedicated group of teachers leading this initiative but there *are* limits to goodwill.

Digital objects

Interactive whiteboards offer a variety of programs and tools to assist teachers. Access to the Internet and to educational sites that provide curriculum resources is essential. These sites provide the ammunition for interactive whiteboards and they are proliferating and are international.

For Australian schools, one of the most important providers is The Learning Federation (TLF) – see *AEL* 1-2007, pp. 24-27. TLF is a joint initiative of the Australian and New Zealand Governments to develop and provide digital objects and resources for schools. The two Governments had previously

provided over \$30 million to the project. The venture has recently received a further \$52 million in funding. TLF digital objects are closely aligned to Australian curriculum, feature Australian backgrounds, characters and creatures, and have narrators with local accents.

A group of teachers from our school participated in a project to evaluate TLF's digital objects. It was an important project both professionally for our teachers and also in terms of the development of the TLF's objects, which are and will increasingly be an important resource for teachers. Our project involved evaluating a small number of objects from a teaching perspective. We looked at how effective they were in supporting topic teaching, how easily they could be embedded in teaching programs, and developed evaluation criteria for the objects. The process of evaluating the use and relevance of digital objects is one of the most time consuming tasks for teachers who are looking to utilise this technology either for interactive whiteboards or classroom computers.

Our evaluation matrix posed such questions as:

- Was the object easily accessible?
- Did it achieve expected literacy levels?
- Did it achieve the expected computer literacy level?
- Could a student operate and access it independently?
- Did it promote collaboration between students?
- Did it provide performance feedback?
- Did it maintain student interest?

The quality of the digital objects available for interactive whiteboards varies greatly in an increasingly competitive environment. There are many non-commercial sites such as the TLF, but also a growing number of commercial sites. Sorting through these is a major draw on teachers' time. Often the literacy level assumed is higher than a teacher would expect of a grade. The use of written text for instructions is cheaper for the supplier compared to a voice-over narration or a visual cueing system but can be at the cost of student's independent access.

It is critical that classroom teachers be involved in the creation of these digital objects through a collaborative process with the providers and their programmers. This process will ensure not only that the curriculum content is relevant but also that the objects have appropriate literacy levels, are grade appropriate, will maintain student interest, and are based on sound pedagogy.

Briefly...

- In 2006, Bishop Druitt College began installing interactive whiteboards, initially in four classrooms.
- Selected teachers became 'pioneers', to support each other in the new technology and to interest and excite other colleagues.
- By 2008, the hope is that all classrooms will be operating with interactive whiteboards.
- On the basis of experience to date, this article explores a range of issues relating to the implementation of this

technology in schools:

- programs and tools available to assist teachers
- training of staff in the use of the technology
- archiving and the sharing of tools and sites among staff
- installation and financial issues
- It will require good management by school leaders to ensure that teachers get the best out of this technology.

Providing training

We conducted staff surveys about preferred training. We found that 60 per cent of teachers preferred training that was one-to-one coaching with a peer. Small group training was preferred by 66 per cent and 56 per cent preferred to work with their grade partner. Large group instruction scored zero. There are of course times when large group presentations are an appropriate delivery format. The board providers, for example, are likely to favour it for the professional development they offer. However, it is critical for teachers to be given opportunities to follow up these sessions with 'sand pit' time.

'Sand pit' is time allocated for teachers to trial, revise, collaborate, discuss and refine at their own pace. Schools need to provide time for teachers to simply play with this new teaching tool. We have to allow time for self-discovery and we have to budget for this. Teachers will give many hours of their own time but schools cannot rely solely on this good will. In our school the pioneer teachers proved invaluable as guides and coaches for the new users.

Teachers are practical people and want their PD to improve their classroom performance. We made our training useful and practical by asking teachers to create or locate classroom resources during their training. This gave staff not only valuable training in using the boards but equally valuable resources to begin their journey.

As we move to total classroom coverage, we have recognised that our casuals also needed to know how to start the boards, even if only for basic 'blackboard' work. We have provided training for our casual teachers. This was a basic start up and use session. The installation of boards is accompanied by the removal of blackboards due to dust issues with the projector. We kept a small standard whiteboard in the class, however; this is often covered with student work or other messages.

Archiving

One of the greatest assets of the boards – archiving – is also a liability. The plethora of exciting and relevant sites located by our teachers has led to some serious concerns about the archiving of these sites. A related issue has been the sharing of sites between colleagues. We have built into our staff and stage meetings ICT time to provide teachers with an opportunity to share the sites they have found and other exciting functions they have discovered through their use of the boards.

Installation/Costs

The cost of the interactive whiteboards is not insignificant. However, our experience is that it is a very worthwhile investment.

Adding to the costs of purchasing the boards, schools are likely to have some further costs including that of an electrician to provide power to the ceiling-mounted data projector, furniture

for the equipment, accessories such as keyboard, remote control, and slate, and possibly the purchase of a computer to run with the board. We also provided a mini Mac to power the board rather than the teachers' laptops. This meant that teachers could remove their laptops to work in the staffroom but not interrupt the interactive board use by other teachers. The actual installation of the board is usually included in the purchase price.

We found that an initial issue with installation is the height of the board. The interactive board is meant to be just that – interactive. If it is placed at a height suitable for a teacher, it is unlikely to be suitable for a student of Year 3 or younger. Yet it needs to be at a height that does not create OHS issues for staff. We are currently trialling a mobile step/platform. This allows teachers direct access and can be put into place for use by smaller students.

The alignment of the board with its projector has also been an issue. Mounting the boards on brick or other stable walls has proven better than internal

plasterboard walls that tend to have movement with doors slamming. This affects the alignment and requires the teacher to re-align the board. The problem is accentuated in demountable buildings.

Conclusion

Teachers around the world are realising the extraordinary potential of the interactive whiteboard, which is doing much to create major change to the way the curriculum is delivered. Developments in Wales, for example, have seen significant changes in the delivery of the curriculum. In Australia too we are beginning to realise the opportunities presented by this technology. However, it will require good management by school leaders to ensure that our teachers get the best out of this technology. ■

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